

R E M A R K S

The examiner amended the title. The title amendment is acknowledged.

Claim 11 is rejected under § 112 as being indefinite for reciting a “method-like” limitation. Claim 11 has been canceled and this rejection is moot.

Claims 15 and 40 stand rejected under § 112, as being indefinite for reciting “receptor for a gaseous analyte”. The rejection is respectfully traversed.

As recognized by the examiner, a receptor would bind an analyte. The very fact that the examiner is able to suggest alternative language for the claim phrase demonstrates that an artisan would have understood the claim phrase. Additionally, other claims use the term receptor, and such claims were examined in the application and must have been understood. Furthermore, the specification at page 8 beginning on line 4 describes what a receptor is. Accordingly, the rejection of claims 15 and 40 should be withdrawn.

Claims 10-18 and 34-43 stand rejected under § 102 as being anticipated by Trau. The rejection is respectfully traversed.

“[U]nless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim” it cannot anticipate a claim. *Net MoneyIN, Inc. v. VeriSign, Inc.* 545 F.3d 1359, 1371 (Fed. Cir. 2008). Trau fails to disclose each and every feature of the claims, and therefore there has been no proper §102 rejection.

Regarding claim 10, the examiner cites paragraph 91 of Trau as disclosing the features of claim 10. In that paragraph, it is specifically noted that it is a thickness of optical coating on particles that produces unique scattering signals. Particles produced in the same batch are said to have “the same fluorescent inner regions.” Contrary to the position taken in the rejection, Trau discloses no ability to have a particular porosity that is determined by a computer controlled waveform. Because Trau discloses no ability to have a predetermined code (determined in advance) according to the “one of a library of computer controlled waveforms”, Trau cannot anticipate claim 10.

Trau uses a modified sol-gel synthesis process to form particles. [0010]. Trau modifies the process known in the art by producing larger size particles. [0013]; [0019]. As noted in paragraphs 24 and 25, the particles produced in batches are characterized by their dimensions and the percentage of porosity. Process parameters in Trau can be modified to change yields and change particles sizes, but the polymerization process used in Trau does not provide any ability to have a predetermined porosity that varies according to one of a library of computer-controlled waveforms to produce one of a library of codes detectable in the reflectivity spectrum. It is for this reason that Trau also discloses multiple ways to label the particles.

For example, paragraph 82 discusses the attachment of an optical label. Paragraph 83 discusses changing the density of the particles by introducing a substance of

known density. Paragraph 85 discusses filling particle pores with a fluid and adding a visual tag. Paragraph 89 discusses different batches of particles that are coated with different thicknesses of a clear silicon shell. It is the thickness of the shell that determines a different optical response, and these various disclosures in Trau clearly indicate that Trau has no ability to produce a particular code in the porosity of Trau's particles.

Trau also fails to disclose a "film" according to claim 10. Claim 10 is directed to a thin film. Trau produces spherical particles, not thin films. Nowhere does Trau disclose an ability to produce anything but a particle, as Trau's processes result in the formation of particles, not films. See, e.g., paragraph [0075]. See, also, e.g., [0020] "the invention features a method of synthesizing porous organosilica spherical particles"; [0025] "The term 'porous organosilica spherical particle' refers to a solid or hollow sphere, or other similar configuration comprising silica and carbonaceous material." This is a separate basis upon which Trau fails to disclose the invention of claim 10. It is noted that a typographical error in the preamble of claim 10 and its associated dependent claims has been corrected such that the preamble matches the body of the claims that specifies a "thin film".

The rejection of claim 34 is separately traversed. Claim 34 is directed to a particle. Like claim 10, however, claim 34 requires a code from a library of codes. This code is determined in advance, and therefore Trau fails to disclose the invention of claim 34.

As a separate basis of traversal, claim 34 also requires that the code from the library of codes be embedded in the physical structure of the particle "by refractive index

changes between different regions of the particle”. Trau discloses no refractive index changes in the particle and no separate regions. There is a general porosity and Trau discloses producing optical responses by coatings and introduction of materials into the pores of the particle. There is no indication of separate regions of different porosity in a particle of Trau.

The rejection of claim 36 is separately traversed. Claim 36 requires that different regions of a particle have different thickness. Trau discloses spherical particles and does not anywhere discuss having regions of different thicknesses.

The rejections of claims 17 and 42 are separately traversed. Silica is not silicon, it is silicon dioxide. Trau’s processes are sol gel processes that don’t produce silicon, and are incapable of producing porous silicon. Preferred embodiments of the invention are defined in claims 17 and 42 and have advantages as discussed in the paragraph that begins on page 7, line 22 of the instant application.

The rejection of claim 43 is separately traversed. The reasons stated with respect to claim 10 demonstrate that Trau does not produce particles with a porosity “whose optical reflectivity spectrum can be recognized as a distinct interference pattern from one of a library of patterns.”

New claims 44 and 45 have been added. These claims are respectively directed to a thin film library and a particle library. With the invention, a library can be created where each particle or film has its own unique code selected from a library and that is distinct from

all other particles in the library. Trau discloses an ability to produce batches of particles having the same code, and discloses no ability to produce a library of particles or a library of films having unique codes (as noted above Trau can't produce films at all).

For all of the above reasons, applicants request reconsideration and allowance of the application. Should the examiner believe that outstanding issues exist or that a conference would expedite prosecution, the examiner is invited to contact the undersigned attorney at the below listed number.

Respectfully submitted,

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